

ABSTRACT

A method for producing a catalyst containing given atoms in a given atomic proportion for use in producing methacrylic acid through gas-phase catalytic oxidation of methacrolein with molecular oxygen comprising the steps of:

(i) preparing a solution or slurry containing at least molybdenum, phosphorus, and vanadium (liquid I);

(ii) preparing a solution or slurry containing ammonium radical (liquid II);

(iii) preparing a mixture of the liquid I and the liquid II by introducing one liquid (liquid PR) of the liquid I and the liquid II into a tank (tank A) and pouring the other liquid (liquid LA) on a continuous region in the surface of the liquid PR, the continuous region occupying 0.01 to 10% of the whole area of the surface of the liquid PR; and

(iv) drying and calcining the resultant solution or slurry containing a catalyst precursor comprising all the catalyst constituents.